REMARKS

Favorable reconsideration of this application is respectfully requested in view of the following remarks.

Pending Claims

Independent claim 20 and dependant claims 2-19 are currently pending.

Rejection Under 35 U.S.C. §102(e)

The Official Action rejected claims 1-3, 9-13 and 17-18 under 35 U.S.C. §102(e) as being anticipated by U.S. Patent No. 6,039,922 to *Swank et al.* (the '922 patent). The Applicant respectfully traverses the rejection. New independent claim 20 claims a method for sterilizing a packaging sheet material. The method includes applying hydrogen peroxide to the packaging sheet material and then removing a substantial amount of hydrogen peroxide from a surface of the packaging sheet material. A substantial amount of hydrogen peroxide is removed from the surface such that a residual quantity is absorbed by or located at microorganisms present on the surface of the packaging sheet material. The method also includes irradiating the packaging sheet material with UV light. The operation of removing a substantial amount of hydrogen peroxide from the surface of the packaging sheet material is done after the operation of applying hydrogen peroxide and before the operation of irradiating the packaging sheet material. The operation of removing a substantial amount of hydrogen peroxide is done such that the residual quantity of

Received from < > at 6/20/03 10:26:47 AM [Eastern Daylight Time]

hydrogen peroxide absorbed by or located at the microorganisms present on the surface is directly targeted during the irradiation operation.

The Applicant respectfully submits that the '922 patent does not disclose each and every element claimed in new independent claim 20 as required under 35 U.S.C. §102(e). More specifically, the '922 patent does not disclose a method which includes the operation of removing a substantial amount of hydrogen peroxide after application of the hydrogen peroxide to a packaging sheet material and prior to irradiation of the packaging sheet material with UV light. The Applicants respectfully submit that the operation alleged in the Official Action is not necessary to the invention disclosed in the '922 patent. See col. 4, lines 56-62. Rather, the '922 patent explicitly claims that a substantial amount of hydrogen peroxide is not removed until after irradiation of partially formed cartons, as claimed in independent claim 1 of the '922 patent. See col. 15, lines 44-47. Therefore, the '922 patent discloses that a substantial amount of hydrogen peroxide is still present on the packaging material during the UV irradiation step. Likewise, the '922 patent does not disclose directly targeting a residual quantity of hydrogen peroxide absorbed by or located at microorganisms present on a surface of a packaging sheet material, as claimed in independent claim 20, since a second step is required to remove a substantial amount of hydrogen peroxide in the '922 patent. In addition, the '922 patent is directed to a mandrel bending machine whereas the present invention is directed to a continuous web based packaging machine. Therefore, Applicant respectfully submits that independent claim 20 is not anticipated by the '922 patent under 35 U.S.C. § 102(e). Dependent claims 2-3, 9-13

Received from < > at 6/20/03 10:26:47 AM [Eastern Daylight Time]

and 17-18, which depend from independent claim 20, are also patentable for at least the same reasons as discussed above with regards to independent claim 20 and for the additional novel features they recite.

Rejection Under 35 U.S.C. §103(a)

In addition to the rejections under 35 U.S.C. §102(e), the Official Action also rejected claims 4-5, 7-8, 14 and 16 under 35 U.S.C. §103(a) as being unpatentable over the '922 patent. As required in Chapter 2143.03 of the Manual of Patent Examining Procedure, in order to "establish *prima facie* obviousness of a claimed invention, all the claim limitations must be taught or suggested by the prior art." As previously discussed, the '922 patent does not disclose each and every element claimed in independent claim 20, from which claims 4-5, 7-8, 14 and 16 depend. Therefore, the Applicant believes that the '922 patent does not teach all the claim limitations of claims 4-5, 7-8, 14 and 16 as required under 35 U.S.C. §103(a). As such, the Applicant respectfully submits that claims 4-5, 7-8, 14 and 16 are not unpatentable under 35 U.S.C. §103(a) over the '922 patent and respectfully requests that the rejection be withdrawn.

In addition, the Official Action rejected claims 6 and 19 under 35 U.S.C. §103(a) as being unpatentable over the '922 patent in view of U.S. Patent No. 5,843,374 to *Sizer et al* (the '374 patent). As discussed above, the '922 patent does not disclose each and every element claimed in independent claim 1 from which claims 6 and 19 depend. The Applicant respectfully submits that the '374 patent does not overcome the shortcomings of

Received from < > at 6/20/03 10:26:47 AM [Eastern Daylight Time]

the '922 patent. Thus, the Applicant believes that not all the elements claimed in claims 6 and 19 are taught or disclosed in either the '922 patent or the '374 patent, either singularly or in combination, as required under 35 U.S.C. §103(a). The Applicant respectfully submits that claims 6 and 19 are not unpatentable over the '922 patent in view of the '374 patent under 35 U.S.C. §103(a) and respectfully requests that the rejection be withdrawn.

In addition to rejecting claims 6 and 19 under 35 U.S.C. §103(a), the Official Action rejected claim 15 under 35 U.S.C. §103(a) as being unpatentable over the '922 patent in view of U.S. Patent No. 4,225,556 to *Löthman et al* (the '556 patent). As discussed earlier, the '922 patent does not disclose each and every element of claim 20, from which claim 15 depends. Moreover, the '556 patent does not disclose the features lacking in the '922 patent. Thus, the Applicant respectfully submits that claim 15 is not unpatentable over the '922 patent in view of the '556 patent under 35 U.S.C. §103(a) and respectfully requests that the rejection be withdrawn.

Received from < > at 6/20/03 10:26:47 AM [Eastern Daylight Time]

CONCLUSION

For all of the above reasons, the Applicant respectfully submits that the present application is in a condition for allowance. The Examiner is urged to allow the claims and pass the application to issue. Should the Examiner have any questions, the Examiner is invited to call the undersigned attorney at the number listed below.

Respectfully submitted,

BURNS, DOANE, SWECKER & MATHIS, L.L.P.

Date: June 20, 2003

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CERTIFICATE OF FACSIMILE TRANSMISSION

I hereby certify that this correspondence is being facsimile transmitted to the U.S. Patent and Trademark Office Fax No. (703) 872-9311 on June 20, 2003.

_____
Anthony J. Josephson

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Attachment to Amendment and Response dated June 20, 2003

Mark-up of Claims

2. (Amended) Method according to claim [1] 20, [characterized in that] wherein said step of applying hydrogen peroxide to said packaging sheet material comprises applying liquid hydrogen peroxide thereto at a concentration of up to 50% by weight.

3. (Amended) Method according to claim [1] 20, [characterized in that] wherein said step of applying hydrogen peroxide to said packaging sheet material[,] comprises applying liquid hydrogen peroxide at a concentration of from 20% by weight to 40% by weight.

4. (Twice Amended) Method according to claim [1] 20, [characterized in that] wherein said step of applying hydrogen peroxide to said packaging sheet material comprises the step of immersing said packaging sheet material in a hydrogen peroxide bath at a temperature comprised between 15 degrees Centigrade and 80 degrees Centigrade, for a time interval of from 0.5 seconds to 2 seconds.

5. (Amended) Method according to claim [1] 20, [characterized in that] wherein said [intermediate] step of removing [excess] a substantial amount of hydrogen peroxide from said packaging sheet material comprises blowing a stream of heated air,

Received from < > at 6/20/03 10:26:47 AM [Eastern Daylight Time]

Attachment to Amendment and Response dated June 20, 2003

heated to a temperature [of] from 80 degrees Centigrade to 150 degrees Centigrade onto said packaging sheet material.

6. (Amended) Method according to claim [1] 20, [characterized in that] wherein said step of irradiating the packaging sheet material with light including at least one UV wavelength, [consists] comprises of irradiating said packaging sheet material with polychromatic UV light.

7. (Amended) Method according to claim [1] 20, [characterized in that] wherein said step of irradiating the packaging sheet material with light including at least one UV wavelength, [consists of] comprises irradiating said packaging sheet material with UV light at a wavelength of 222nm.

9. (Twice Amended) Method according to claim [1] 20, [characterized in that] wherein said packaging sheet material is a web unwound from a roll.

10. (Twice Amended) Method according to claim [1] 20, [characterized in that] wherein said packaging sheet material is a blank.

Received from < > at 6/20/03 10:26:47 AM [Eastern Daylight Time]

Attachment to Amendment and Response dated June 20, 2003

11. (Twice Amended) Apparatus for sterilizing a packaging sheet material according to the method defined in claim [1] 20, comprising:

-means for applying hydrogen peroxide to a packaging sheet material moving in an advancement direction,

-means for irradiating the packaging sheet material with light including at least one UV wavelength between 200nm and 320nm, arranged downstream of said means for applying hydrogen peroxide, with respect to said advancement direction, and;

-means for removing the hydrogen peroxide from the surface of the packaging sheet material,

said means for removing the hydrogen peroxide from the surface of the packaging sheet material being interposed between said means for applying hydrogen peroxide and said means for irradiating the packaging material with light including at least one UV wavelength between 200nm and 320nm and in that said means for irradiating are arranged only downstream of the means for removing, whereby a residual or trace quantity of hydrogen peroxide absorbed by or located adjacent to any microorganisms present on said packaging sheet material is directly targeted with UV radiation.